

Serial No. 10/635,502

Docket No. HI-0139

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

Amendments to the Drawings:

The attached drawings include changes to Figs. 1-3. These sheets, which include Figs. 1-3, replace the original sheets including Figs. 1-3. In Figures 1-3, the legend "Prior Art" has been added.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes (may or may not attach)

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

REMARKS

By the present response, Applicant has canceled claim 13 without disclaimer. Further, Applicant has amended the specification, Figs. 1-3, and claims 2, 12 and 16-20 to further clarify the invention. Claims 1-12 and 14-21 are pending in this application.

In the Office Action, the abstract of disclosure is objected to. The disclosure has been objected to for informalities. The drawings have been objected to for informalities. Claims 1-21 have been objected to because of informalities. Claim 2 has been rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 16 and 21 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,094,097 (Ke). Claims 12-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ke in view of U.S. Patent No. 6,895,230 (Blount et al.). Claims 2-11 would be allowable if rewritten or amended to overcome the claim objections and rejections under 35 U.S.C. § 112, second paragraph. Claims 17-20 would be allowable if rewritten to overcome the claim objections set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 2-11 would be allowable if rewritten or amended to overcome the claim objections and rejections under 35 U.S.C. § 112, second paragraph. Applicant has complied with this request. Further, Applicant thanks the Examiner for indicating that claims 17-20 would be allowable if rewritten to overcome the claim

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

objection set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims.

Specification Objections

The Abstract has been objected to. Applicant has submitted a new Abstract of the Disclosure to further clarify the invention and respectfully requests that this objection be withdrawn.

The specification has been objected to because of informalities. Applicant has amended the specification to further clarify the invention and respectfully requests that these objections be withdrawn.

Drawing Objections

Figures 1-3 have been objected to as missing a legend "Prior Art". Applicant has amended these figures and respectfully requests that these objections be withdrawn.

Claim Objections

Claims 1-21 have been objected to because of informalities. Specifically, the Examiner suggests replacing all occurrences of "LPA" with "Linear Power Amplifier" and all occurrences of "FA" with "Frequency Assignment" in order to maintain uniformity in naming the elements of the claims. Applicant thanks the Examiner for this suggestion and in response has amended all independent claims to insure that "Linear Power Amplifier" and "Frequency Assignment" are clearly mentioned.

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

Regarding claim 18, Applicant has amended this claim to further clarify the invention.

Accordingly, Applicant respectfully requests that these objections be withdrawn.

35 U.S.C. § 112 Rejections

Claim 2 has been rejected for antecedent basis issues. Applicant has amended this claim to further clarify the invention and respectfully requests that this rejection be withdrawn.

35 U.S.C. § 102 Rejections

Claims 1, 16 and 21 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Ke. Applicant respectfully traverses these rejections.

Ke discloses a programmable combiner including a first terminal providing a radio frequency input signal, a second terminal providing a radio frequency output signal, a plurality of linear amplifiers in connection therebetween, and switch means coupling individual ones of the plurality of amplifiers in series connection between the first and second terminals and providing a redundancy of continuing circuit operation upon the failure of any one or more amplifiers, and in providing a controllable level of output signal at the second terminal as gain characteristics of one or more of the amplifiers vary, or as different output power signal levels are required.

Regarding claims 1 and 16, Applicant submits that Ke does not disclose or suggest the limitations in the combination of each of these claims. For example, the Examiner asserts that Ke discloses wherein the LPA shelf controls a path of at least one sector signal according to

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

LPA types determined by LPA installation and a number of frequency assignments, at col. 1, lines 20-58. However, these portions merely disclose the hardware structure of the RF power combiner that provides a redundancy of continuing circuit operation upon the failure of any one or more of the linear amplifiers, while at the same time, providing a controllable level of output signal at the second terminal as the gain characteristics of one or more of the amplifiers vary, or as different output power signal levels are required. These portions do not disclose or suggest controlling a path of at least one sector signal according to LPA types determined by LPA installation and number of frequency assignments, as recited in the claims of the present application.

Further, the Examiner asserts that Ke discloses determining a to-be-changed LPA type based on a current LPA type and the number of frequency assignments according to open collector signals generated from each LPA, in the Abstract, col. 2, lines 11-65, Figure 1 and elements 10, 110, 112, 114, 115 and 118. However, these portions merely disclose impedance matching circuits 120, 122, 124 of decreasing impedance ratio of the order of 1:1, 1:2 and 1:3, and linear amplifiers 110, 112 and 114, and that in the input section 10, an RF signal is coupled to the input of a three way splitter whose outputs feed the three impedance matching circuits. These portions do not disclose or suggest determining a to-be-changed LPA type based on a current LPA type and the number of frequency assignments according to open collector signals generated from each LPA, as recited in the claims of the present application. Ke is merely

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

directed to redirecting RF signal flow to other impedance matching circuits and amplifiers in the event of the failure of any one or more of the amplifiers where the switching is controlled such that the amplifier apparatus provides either increasing or decreasing power output level depending on system needs. Ke has nothing to do with determining a to-be-changed LPA type based on a current LPA type and the number of frequency assignments.

Regarding claim 21, Applicant submits that this claim is dependent on independent claim 16 and, therefore, is patentable at least for the same reasons noted previously regarding this independent claim.

Accordingly, Applicant submits that Ke does not disclose or suggest the limitations in the combination of each of claims 1, 16 and 21 of the present application. Applicant respectfully requests that these rejections be withdrawn and that these claims be allowed.

35 U.S.C. § 103 Rejections

Claims 12-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ke in view of Blount et al. Claim 13 has been canceled therefore rendering this rejection moot. Applicant respectfully traverses these rejections to the remaining pending claims.

Blount et al. discloses systems and methods for addressing the effects of non-linear phase response, such as by equalizing electrical delays among transmission paths. Phase detection circuitry and phase adjustment circuitry are provided in the signal paths of a multiple beam or phase array antenna to provide delay equalization of the signal paths. Communication systems

Serial No. 10/635,502

Docket No. HI-0139

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

implementing the systems and methods are provided broadband phase calibration and, therefore, are enable to provide controlled and predictable beam forming over a broad range of frequencies.

Regarding claim 12, Applicant submits that none of the cited references, taken alone or in any proper combination, disclose suggest or render obvious the limitations in the combination of this claim of, *inter alia*, determining a LPA type according to the LPA installation to-be-changed LPA type based on the current LPA type and the number of frequency assignments. As noted previously, Ke does not disclose or suggest these limitations. Further, Blount et al. does not overcome the substantial defects noted previously regarding Ke and also fails to disclose or suggest these limitations.

Regarding claims 14 and 15, Applicant submits that these claims are dependent on independent claim 12 and, therefore, are patentable at least for the same reasons noted previously regarding these independent claims.

Accordingly, Applicant submits that none of the cited references, taken alone or in any proper combination, disclose suggest or render obvious the limitations in the combination of each of claims 12, 14 and 15 of the present application. Applicant respectfully requests that these rejections be withdrawn and that these claims be allowed.

Serial No. **10/635,502**

Docket No. **HI-0139**

Amdt. dated May 18, 2006

Reply to Office Action of February 27, 2006

CONCLUSION

In view of the foregoing Amendments and remarks, Applicant submits that claims 1-12 and 14-21 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Frederick D. Bailey, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



Daniel Y.J. Kim
Registration No. 36,186
Frederick D. Bailey
Registration No. 42,282

P.O. Box 221200

Chantilly, Virginia 20153-1200

(703) 766-3701 DYK/FDB:dg

Date: May 18, 2006

\\Fk4\Documents\2019\2019-127\88041.doc

Please direct all correspondence to Customer Number 34610